

Appln No. 10/532,513
C. Martins et al
Office Action dated October 12, 2006

This listing of claims will replace all prior versions and listing of claims in the application.

LISTING OF CLAIMS

1-14 (cancelled)

15. (new) A motor vehicle condenser comprising:

a multitude of stacked main-section plates having separate internal flow channels for refrigerating fluid and for cooling fluid,

wherein the main-section plates are assembled to delimit alternating first flow channels for refrigerating fluid and second flow channels for cooling fluid.

16. (new) A motor vehicle condenser, as claimed in claim 15, wherein the plates are assembled in groups or sub groups of plates such that they form at least two fluid passes.

17. (new) A motor vehicle condenser, as claimed in claim 16, wherein the plates further comprise communication passages to allow refrigerating and cooling fluid to pass from one flow channel to another and annular ducts facing the communication passages.

18. (new) A motor vehicle condenser, as claimed in claim 17, wherein the annular ducts alternately face the communication passages in such a way that the refrigerating and cooling fluid are prevented from mixing with one another.

19. (new) The condenser as claimed in claim 18, wherein the main-section plates are equipped with two communication passages intended for the passage of the refrigerating fluid (F1) and two communication passages intended for the passage of the cooling fluid (F2).

Appln No. 10/532,513
C. Martins et al
Office Action dated October 12, 2006

20. (new) The condenser as claimed in claim 18, wherein the stacked plates (2) are equipped with turned-up peripheral edges (3) which are joined together in a sealed manner.

21. (new) The condenser as claimed in claim 18, wherein the condenser comprises at least one inlet and one outlet for refrigerating fluid and at least one pass (a) over the refrigerating fluid communicating with said inlet, known as the inlet pass, and another pass (c) communicating with said outlet, known as the outlet pass, the cross section of the passes diminishing from the inlet pass towards the outlet pass.

22. (new) The condenser as claimed in claim 18, wherein one refrigerating fluid communication passage or, as appropriate, one cooling fluid communication passage, is omitted in some of the main-section plates so as to determine passes for the circulation of the refrigerating fluid or, as appropriate, for the circulation of the cooling fluid.

23. (new) The condenser as claimed in claim 18, wherein the plates (2) are arranged in a first series (94) for cooling the refrigerating fluid until it condenses, and a second series (96) for cooling the refrigerating fluid below the temperature at which it condenses.

24. (new) The condenser as claimed in claim 23, wherein the condenser further comprises a bottle (100) built in between the first and second series of plates (94, 96).

25. (new) The condenser as claimed in claim 18, wherein turbulence generators (132, 136) are arranged between the plates (2).

26. (new) The condenser as claimed in claim 19, wherein the plates have reliefs (144, 150, 158, 160) which constitute the turbulence generators.

27. (new) The condenser as claimed in claim 18, wherein the hydraulic diameter of the flow channels for the fluids (F1 and F2) is between 0.1 mm and 3 mm.

28. (new) Condenser as claimed in claim 18, wherein the annular ducts consist of bowls (122) formed in the plates (2).

29. (new) A motor vehicle cooling circuit comprising the condenser as claimed in claim 18, wherein the plates are assembled to allow for the flow of a cooling fluid (F2) consisting of water from the motor vehicle engine cooling circuit.

Appln No. 10/532,513
C. Martins et al
Office Action dated October 12, 2006

30. (new) An air-conditioning circuit, for the cabin of a motor vehicle, comprising an evaporator, a compressor and a condenser, in which a refrigerating fluid circulates, and wherein the condenser is in accordance with claim 18.

31. (new) A motor vehicle condenser, as claimed in claim 28, wherein the condenser comprises at least one inlet and one outlet for refrigerating fluid and at least one inlet pass (a) over the refrigerating fluid communicating with said inlet, and another outlet pass (c) communicating with said outlet, and the cross section of the passes diminishing from the inlet pass towards the outlet pass.

32. (new) A motor vehicle condenser, as claimed in claim 28, wherein one refrigerating fluid communication passage or one cooling fluid communication passage, is omitted in some of the main-section plates so as to determine passes for the circulation of the refrigerating fluid or for the circulation of the cooling fluid.